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ART UNIT	PAPER NUMBER
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1102

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

08/606,226

Applicant(s)

Kyoko Ikawa, et al.

Examiner

Brendan Mee

Group Art Unit

1102



☐ Responsive to communication(s) filed on \_\_\_\_\_

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-33 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-33 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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### **Part III DETAILED ACTION**

#### ***Specification***

1. Numerous changes to the specification have been made by informal Examiner's amendment as indicated in the Office action mailed August 23, 1995 (paper no. 3).

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C 112, first paragraph, as failing to describe the apparatus in such full, clear, concise and exact terms as to enable any person skilled in the art . . . to make and use the same. At page 11, line 3-4, the phrase "with understanding operating condition of the sarrounding the loads" is unclear. At page 21, line 8, "t%" is unclear. In the figures, both elements 1 and 5 are "loads" which makes it impossible to understand how "load" is used in the claims.

#### ***Claim Objections***

3. Claims 1-33 objected to because of the following informalities:

Words run together throughout the claims. In claim 3, "storage" misspelled at lines 5, 8 and 12; "secondary" misspelled at line 6. In claim 4 "storage" is misspelled at lines 5, 8 and

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12. In claim 5 the phrase "a electric power strage units" is objected to; "storage" is misspelled at lines 5 and 7, "signalling for transmitting" is either a typo or indefinite. In claim 10, line 4, "or" (first occurrence) should be --of--. In claim 12, "storage" and "secondary" are misspelled. In claim 15, "memory" and "optimum" are misspelled. In claim 16, "discharging" is misspelled. In claims 17 and 20, "storage" is misspelled. In claim 20, "prior" and "of" are misspelled. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. Claims 1-33 rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objections to the specification.

5. Claims 1-33 rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the phrase "a signal line for transmitting information on said load and to said second battery to said control unit" is indefinite because it is not possible to determine where the signal is transmitted from and where it is transmitted to.

In claims 1, 3, 4, 12, and 19 it is not clear how power is discharged to "said power system." The preamble recites the entire combination as the "power system." How would charge be discharged to the power system anyway?

In claims 2-5, 12, 17 "predetermined value" is indefinite.

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Claim 4 is a duplicate of claim 3.

In claim 11, "at least" followed by the Markush group is improper.

In claims 3 and 12, "connectable" is indefinite as not reciting a structural limitation.

"A/D" should be spelled out.

In claims 22-25 "night period rate" electric power is indefinite. The price of the electric power is not patentable subject matter.

In claim 26, 28 "in a mode conforming to optimum discharge capacity" is indefinite. It is not clear how that capacity is calculated, and what the resulting "mode" is.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claims 1-6, 10, and 19 rejected under 35 U.S.C. § 102(b) as anticipated by US

5,254,929 (Yang). Yang discloses an intermediate storage battery charging system

comprising: a secondary battery (103), connected to loads (105-1...n), a control device (107)

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which "senses the residual electrical energy" in battery (103) (see col. 2, lines 24-25 and col. 3, lines 19-20), rectifier (102) which charges battery (103) with power from the source (101), a control scheme for control device (107) which provides a signal of storage battery charge to the control device to control charging during certain peak/non-peak times (col. 3, l. 16-39).

Thus, all of the elements claimed in claim 1 are met by this reference.

a. The method type limitations expressed in the last indented paragraph of claim 1 and throughout many of the apparatus claims 1-18 may have little weight in claims to an apparatus. *Ex Parte Wikdahl*, 10 USPQ 2d 1546, 1548 (BPAI 1989), *Ex Parte McCullough*, 7 USPQ 2d 1889, 1891 (BPAI 1988); *In re Finsterwalder* 168 USPQ 530 (CCPA 1971); *In re Casey* 152 USPQ 235, 238 (CCPA 1967).

b. Claim 19 basically says that when the charge on the secondary battery is above a certain value the secondary battery serves the loads, and when the charge on the secondary battery is less than a certain value the power supply serves the loads. The Yang reference expresses the same idea from a different perspective: at times of "peak demand" the secondary battery serves the loads, at times of "non-peak demand" AC source serves the loads (see col. 2, lines 18-33; col. 3, lines 28-34). "Peak demand" in Yang corresponds to charge on the secondary battery "above a predetermined value" in claim 19 and "non-peak demand" in Yang corresponds to charge on the secondary battery "below a predetermined value" in claim 19. Inherently, after discharging during peak demand the intermediate battery in Yang has a lesser residual charge (i.e. below a certain value) and after being charged during non-peak demand,

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the intermediate battery has a higher residual charge (i.e. above a predetermined value).

Therefore all of the method limitations of claim 19 are met by the reference.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 7-9, and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Yang in view of US 4,583,034 (Martin). Yang discloses the elements described in the rejection of independent claim 1, Yang does not disclose a computer or indicating means. Martin discloses a computer programmed battery charge control system comprising: means to measure current in and out of a battery, computer means to calculate residual charge and display means (see claims 1 and 32). It would have been obvious to incorporate elements of the Martin computer control system into the control units (107, 104) of Yang because Yang generically discloses that the unit "senses the residual electrical energy already stored in the device" and one of ordinary skill in the art would have looked to systems known in the art (and more explicitly described in the art) for performing that function. With respect to claims 9 and 11, one of

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ordinary skill in the art would have selected from among commercially available storage batteries, such as lead acid type.

10. Claims 12-18 rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,254,929 (Yang), US 4,583,034 (Martin) and US 5,530,335 (Decker). Yang and Martin disclose the basic elements described in the rejection of claim 7 above. Although Martin discloses a computer responsive to voltage and current sense means on a battery, the reference does not explicitly show an A/D converter. In substantially the same context, Decker discloses an A/D converter for converting signals obtained from battery sense means (element 32 in Fig. 1). It would have been obvious to incorporate an A/D converter as in Decker into the control system of Martin because computers typically require a digital input.

11. Claim 20 rejected under 35 U.S.C. § 103 as being unpatentable over US 5,254,929 (Yang) and US 3,445,744 (Henderson). Yang discloses an intermediate storage battery charging system comprising: a secondary battery (103), connected to loads (105-1...n), a control device (107) which "senses the residual electrical energy" in battery (103), rectifier (102) which charges battery (103) with power from the source (101), a control scheme for control device (107) which provides a signal of storage battery charge to the control device to control charging during certain peak/non-peak times (col. 3, l. 16-39), all as described in the rejections above. Yang does not disclose the method feature recited in the last "wherein" clause of claim 20, which basically says that the secondary battery is discharged prior to charging. Henderson discloses a method and means for discharging a battery prior to



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charging. It would have been obvious to incorporate the Henderson control means onto the charging unit of Yang because it is well known in the art that discharging certain batteries fully before recharging will prolong battery life.

12. Claims 21-33 rejected under 35 U.S.C. 103(a) as being unpatentable over Yang and Henderson as applied to claim 20 above and further in view of US 4,575,679 (Chung). These claims introduces the feature that the load is selected with reference to information about the battery and the operating condition of the loads. Chung discloses a method for "load shedding," which means selectively connecting the essential and non-essential loads to the battery based on information about the battery (col. 3, line 30-42). It would have been obvious to incorporate a control scheme such as that described in Chung into the method of Yang because the whole emphasis on Yang is to supply power to a plurality of loads efficiently.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Brendan Mee between 8 a.m. and 5 p.m. Monday through Friday at (703) 308-3331. In the event the examiner cannot be reached, the supervisor of Art Unit 1102, Kathryn Gorgos may be reached at (703) 308-3328. Messages may be left with the group receptionist at (703) 308-0661. The group fax number is (703) 305-3599.

Brendan Mee

September 25, 1996 BM

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